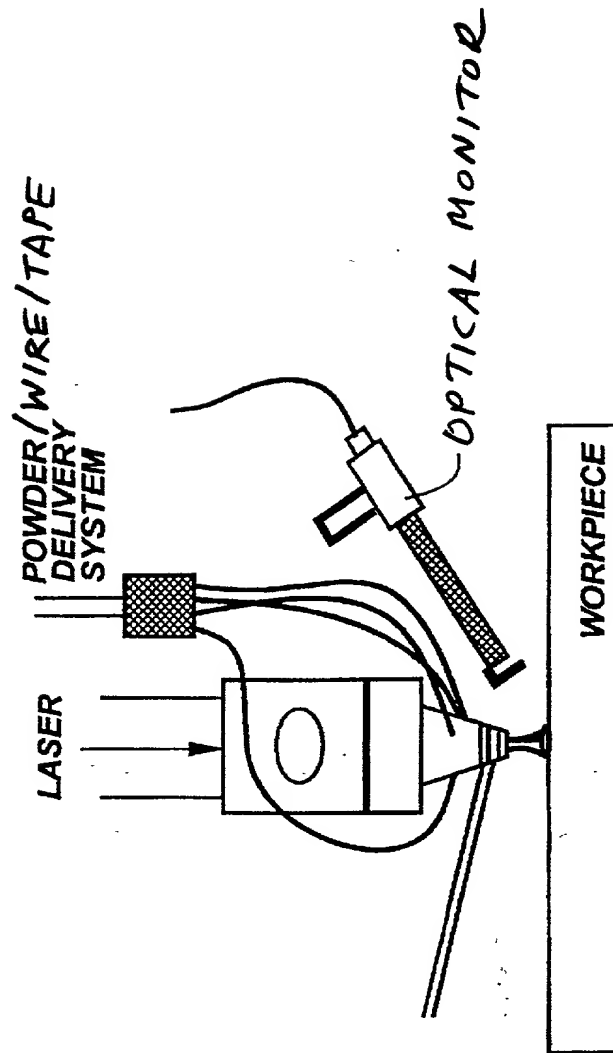


Figure - 1

Figure - 2



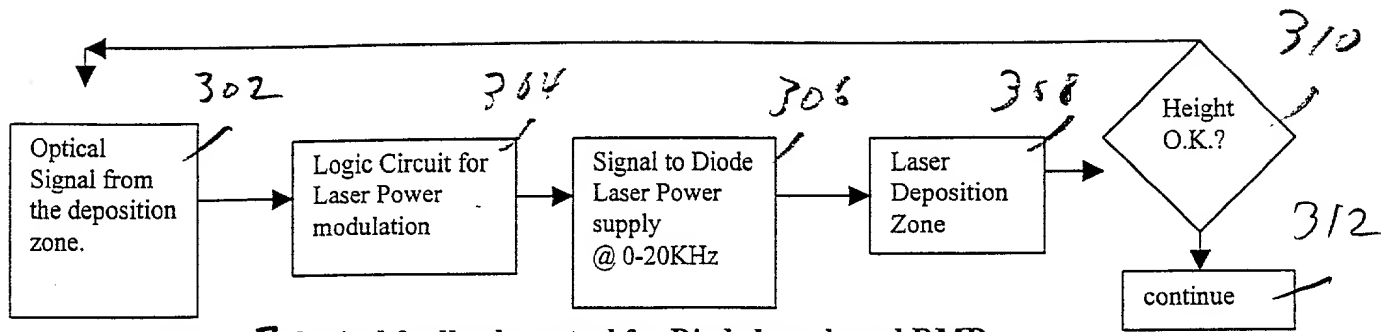
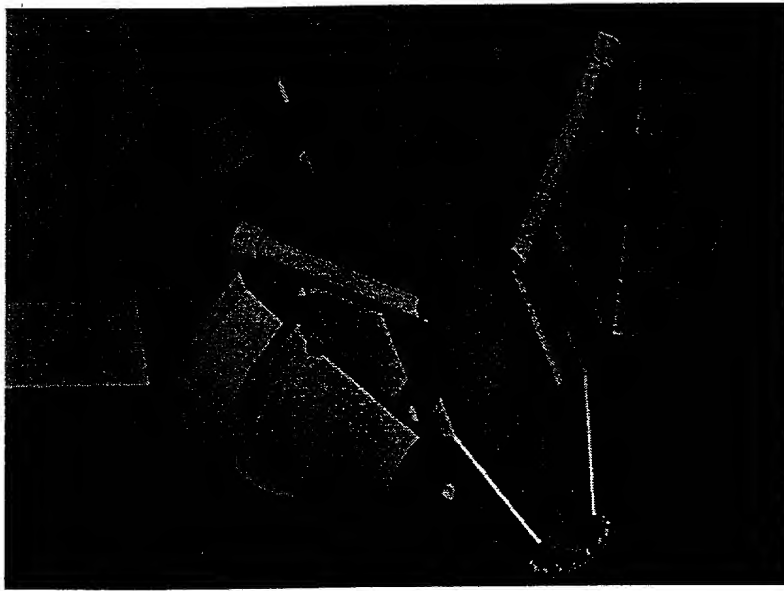
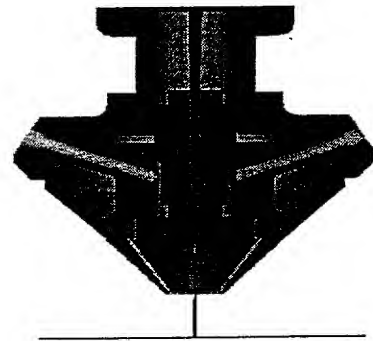


Figure 3 Optical feedback control for Diode laser based DMD



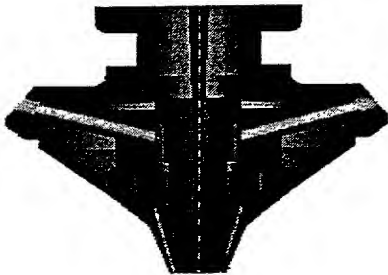
a

DMD Nozzle - 11.6 mm Stand-off



b

DMD Nozzle - 28.0 mm Stand-off



c

Figures 4a-c: Cross sectional views of the concentric nozzle at various stand-off distances with powder shaping gas

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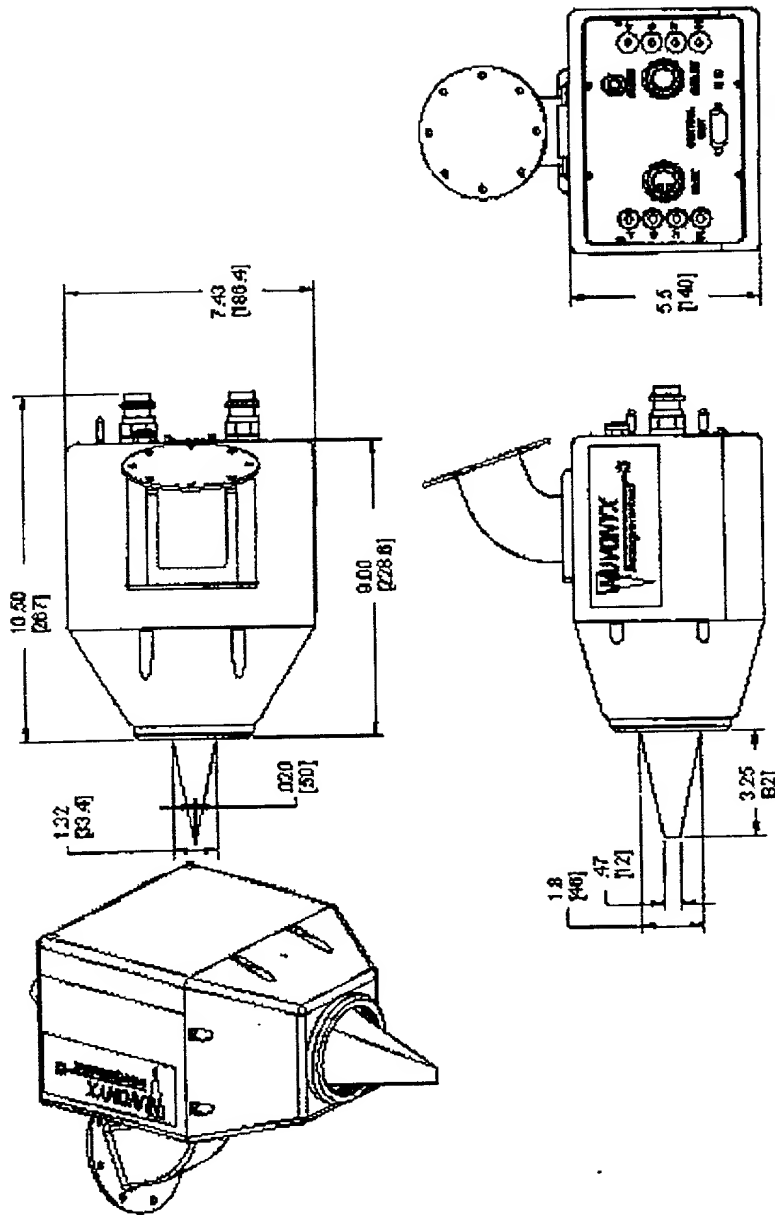


Fig-5

SL-4000L SYSTEM

SECTION H-H
 0.5 [12]
 0.02 [05]

SECTION F-F
 0.8 [20]
 0.3 [7]

SECTION D-D
 1.1 [28]
 0.6 [14]

SECTION C-C
 1.3 [32]
 0.7 [18]
 0.020 [05]

SECTION E-E
 1.0 [24]
 0.4 [11]

SECTION G-G
 0.6 [16]
 0.2 [4]

F-F 20mm x 7mm
 WORKING DISTANCE 74mm or 144mm
 POWER DENSITY AT 4000 WATTS 2,857W CM/5Q.

C-C 32mm x 18mm
 WORKING DISTANCE 44mm or 144mm
 POWER DENSITY AT 4000 WATTS 694W CM/5Q.

D-D 28mm x 14mm
 WORKING DISTANCE 51mm or 134mm
 POWER DENSITY AT 4000 WATTS 1020W CM/5Q.

E-E 25mm x 11mm
 WORKING DISTANCE 64mm or 124mm
 POWER DENSITY AT 4000 WATTS 1515W CM/5Q.

G-G 16mm x 4mm
 WORKING DISTANCE 84mm or 104mm
 POWER DENSITY AT 4000 WATTS 6,250W CM/5Q.

H-H FOCAL POINT 12mm x 5mm
 WORKING DISTANCE 94mm
 POWER DENSITY AT 4000 WATTS 66,667W CM/5Q.

Fig-6